1	2
Meghalaya	17,245
Andhra Pradesh	36,196
Chhattisgarh	3,986
Karnataka	4,233
Rajasthan	4,880
Uttar Pradesh	785
Himachal Pradesh	784
Maharashtra	355
Uttarakhand	100
Total	1,16,373

[1 Tonne of U_3O_8 = 0.848 tonnes of uranium metal]

(c) Uranium corporation of India Ltd. (UCIL), a Public Sector undertaking under the administrative control of the Department of Atomic Energy is engaged in mining of uranium and commercial production of uranium. Presently ore production of uranium is carried out in the State of Jharkhand as per the following details:

Mines	Annual Ore Production (tonnes per year)
Jaduguda	1,95,000
Bhatin	42,000
Narwahpahar	3,00,000
Turamdih	2,25,000
Banduhurang	7,20,000

Generation of atomic energy

†1087. SHRI RAMJETHMALANI:
SHRI RAJ MOHINDER SINGH MAJITHA:

Will the PRIME MINISTER be pleased to state:

(a) whether it is a fact that India has become successful in generating atomic energy by developing thorium technique;

(b) if so, the facts thereof; and

(c) the quantity of total reserves of thorium ascertained in India till now and quantum of power which can be generated thereby in the country?

†Original notice of the question was received in Hindi.

THE MINISTER OF STATE IN THE PRIME MINISTER'S OFFICE (SHRI PRITHVIRAJ CHAVAN): (a) Yes, Sir.

(b) India has formulated a three stage nuclear power programme to optimally use its modest small uranium and vast thorium resources. Large scale thorium utilization is contemplated in the third stage of this programme, where Uranium-233 bred in Fast Breeder Reactors of the second stage, will be used together with thorium.

The government has taken a number of steps to develop appropriate technologies for the utilization of thorium. A few of the major steps are:

(1) Setting up the research reactor Kamini at Kalpakkam using Uranium-233 fuel obtained from irradiated thorium. The reactor has been operating Since 1997. The fuel for the reactor is bred, reprocessed and fabricated indigenously.

(2) Irradiation of thorium fuel bundles in research reactor at trombay and in Pressurised Heavy Water Reactors (PHWRs) has been carried out.

(3) Design and development of Advanced Heavy Water Reactor (AHWR) using thorium based fuel. This reactor will serve as a technology demonstrator.

(c) Around 2,00,000 GW-yr electricity potential exists in India using about 8,07,713 tonnes of Thorium resources that can be obtained from Monazite reserves established in India.

Uranium and Thorium mines

1088. SHRI NANDI YELLAIAH: Will the PRIME MINISTER be pleased to state:

(a) the details of Uranium mines operating in India, State-wise and the average quantum of Uranium produced every year and the quality obtained;

(b) the details of Uranium mines and Thorium mines which are found by Atomic Mineral Directorate, State-wise as on today, which have yet to come under operation;

(c) the average quantum of Uranium and Thorium that is expected in a year out of all newly found Uranium and Thorium mines; site-wise and State-wise; and

(d) the details of budget released exclusively towards scientific research and survey towards finding Uranium and Thorium mines during the period 2005-06, 2006-07 and 2007-08?

THE MINISTER OF STATE IN THE PRIME MINISTER'S OFFICE (SHRI PRITHVIRAJ CHAVAN): (a) Uranium Corporation of India (Ltd.), a PSU under the Department of Atomic Energy is presently operating following Uranium Mines in India:

Mines	State
1	2
Jaduguda	Jharkhand

†Original notice of the question was received in Hindi.